Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) Apparatus for modifying a property of a brain of a patient, comprising:

one or more electrodes, adapted to be applied to a site selected from a group of sites consisting of: a sphenopalatine ganglion (SPG) of the patient and a neural tract originating in or leading to the SPG; and

a control unit, adapted to drive the one or more electrodes to apply a current to the site capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the patient.

2. (Cancelled)

3. (Currently Amended) Apparatus according to ~~claims~~ claim 1, wherein the one or more electrodes are adapted for a period of implantation in the patient greater than about one month.

4-8. (Cancelled)

9. (Original) Apparatus according to claim 1, wherein the control unit is adapted to be implanted in a nasal cavity of the patient.

10. (Original) Apparatus according to claim 1, wherein the one or more electrodes are adapted to be implanted in a nasal cavity of the patient.

11. (Original) Apparatus according to claim 1, wherein at least one of the one or more electrodes comprises a flexible electrode, adapted for insertion through a nostril of the patient and to extend therefrom to the site.

12. (Original) Apparatus according to claim 1, and comprising at least one biosensor, adapted to measure a physiological parameter of the patient and to generate a signal responsive thereto, wherein the control unit is adapted to modify a parameter of the applied current responsive to the signal.

13-16. (Cancelled)

17. (Original) Apparatus according to claim 12, wherein the biosensor comprises transcranial Doppler (TCD) apparatus.

18-25. (Cancelled)

26. (Original) Apparatus according to claim 1, wherein the control unit is adapted to configure the current so as to facilitate uptake of a drug through the BBB when the permeability of the BBB is increased.

27-28. (Cancelled)

29. (Original) A method for modifying a property of a brain of a patient, comprising:

selecting a site from a group of sites consisting of: a sphenopalatine ganglion (SPG) of the patient and a neural tract originating in or leading to the SPG; and

applying a current to the site capable of inducing an increase in permeability of a blood-brain barrier (BBB) of the patient.

30. (Cancelled)

31. (Original) A method according to claim 29, wherein selecting the site comprises implanting an electrode at the site, designated to remain in the patient for a period greater than about one month.

32-36 (Cancelled)

37. (Original) A method according to claim 29, wherein applying the current comprises implanting a control unit in a nasal cavity of the patient.

38. (Original) A method according to claim 29, wherein applying the current comprises implanting one or more electrodes in a nasal cavity of the patient.

39. (Original) A method according to claim 38, wherein implanting comprises inserting a flexible electrode through a nostril of the patient.

40. (Original) A method according to claim 29, and comprising sensing a physiological parameter of the patient and generating a signal responsive thereto, wherein applying the current comprises modifying a parameter of the applied current responsive to the signal.

41. (Original) A method according to claim 40, wherein sensing comprises sensing blood flow of the patient.

42. (Cancelled)

45. (Original) A method according to claim 40, wherein sensing comprises performing a transcranial Doppler (TCD) technique.

46. (Original) A method according to claim 40, wherein sensing comprises performing a laser Doppler technique.

47-53. (Cancelled)

54. (Original) A method according to claim 29, wherein applying the current comprises configuring the current so as to facilitate uptake of a drug through the BBB when the permeability of the BBB is increased.

55-56. (Cancelled)

57. (Original) A method according to claim 29, wherein selecting the site comprises implanting an electrode at the site, designated to remain in the patient for a period less than about one week.

58. (Original) Apparatus according to claim 1, wherein the one or more electrodes are adapted for a period of implantation in the patient less than about one week.

59-66. (Cancelled)

67. (Original) Apparatus according to claim 1, wherein the control unit is adapted to configure the current so as to treat a condition of the patient.

68. (Original) Apparatus according to claim 1, wherein the control unit is adapted to set a parameter of the current, so as to induce the increase in permeability of the BBB.

69. (Original) Apparatus according to claim 68, wherein the parameter includes a frequency of the current, and wherein the control unit is adapted to set the frequency of the current, so as to induce the increase in permeability of the BBB.

70. (Original) Apparatus according to claim 69, wherein the control unit is adapted to set the frequency to be less than about 10 Hz, so as to induce the increase in permeability of the BBB.

71. (Original) Apparatus according to claim 69, wherein the control unit is adapted to set the frequency to be greater than about 10 Hz, so as to induce the increase in permeability of the BBB.

72. (Original) Apparatus according to claim 68, wherein the parameter includes an amplitude of the current, and wherein the control unit is adapted to set the amplitude of the current, so as to induce the increase in permeability of the BBB.

73. (Original) Apparatus according to claim 68, wherein the parameter includes a waveform of the current, and wherein the control unit is adapted to set the waveform of the current, so as to induce the increase in permeability of the BBB.

74. (Original) Apparatus according to claim 73, wherein a shape of the waveform is selected from the list consisting of: an exponential decay, a ramp up or down, a square wave, a monophasic shape, a biphasic shape, a sinusoid, a saw tooth, and a DC component, and wherein the control unit is adapted to set the waveform of the current, so as to induce the increase in permeability of the BBB.

75. (Original) Apparatus according to claim 73, wherein the waveform includes one or more pulse bursts, and wherein the control unit is adapted to set the waveform of the current, so as to induce the increase in permeability of the BBB.

76. Apparatus according to claim 26, wherein the drug includes a chemotherapeutic drug, and wherein the control unit is adapted to configure the current so as to facilitate uptake of the chemotherapeutic drug through the BBB when the permeability of the BBB is increased.

77-78. (Cancelled)

79. (Original) Apparatus according to claim 1, wherein the control unit is adapted to be implanted at a site at a top of a bony palate of the patient.

80. (Original) Apparatus according to claim 1, wherein the control unit is adapted to be implanted at a site at a lower side of a bony palate of the patient.

81-130. (Cancelled)

131. (Original) A method according to claim 29, wherein applying the current comprises configuring the current so as to treat a condition of the patient.

132. (Original) A method according to claim 29, wherein applying the current comprises setting a parameter of the current, so as to induce the increase in permeability of the BBB.

133. (Original) A method according to claim 132, wherein the parameter includes a frequency of the current, and wherein setting the parameter

comprises setting the frequency of the current, so as to induce the increase in permeability of the BBB.

134. (Original) A method according to claim 133, wherein setting the frequency comprises setting the frequency to be less than about 10 Hz, so as to induce the increase in permeability of the BBB.

135. (Original) Apparatus according to claim 133, wherein setting the frequency comprises setting the frequency to be greater than about 10 Hz, so as to induce the increase in permeability of the BBB.

136. (Original) A method according to claim 132, wherein the parameter includes an amplitude of the current, and wherein setting the parameter comprises setting the amplitude of the current, so as to induce the increase in permeability of the BBB.

137. (Original) A method according to claim 132, wherein the parameter includes a waveform of the current, and wherein setting the parameter comprises setting the waveform of the current, so as to induce the increase in permeability of the BBB.

138. (Original) A method according to claim 137, wherein a shape of the waveform is selected from the list consisting of: an exponential decay, a ramp up or down, a square wave, a monophasic shape, a biphasic shape, a sinusoid, a saw tooth, and a DC component, and wherein setting the parameter comprises setting the waveform of the current, so as to induce the increase in permeability of the BBB.

139. (Original) A method according to claim 137, wherein the waveform includes one or more pulse bursts, and wherein setting the parameter comprises setting the waveform of the current, so as to induce the increase in permeability of the BBB.

140. (Original) A method according to claim 54, wherein the drug includes a chemotherapeutic drug, and wherein configuring the current comprises configuring the current so as to facilitate uptake of the chemotherapeutic drug through the BBB when the permeability of the BBB is increased.

141-142. (Cancelled)

143. (Original) A method according to claim 29, wherein applying the current comprises implanting a control unit at a site at a top of a bony palate of the patient.

144. (Original) A method according to claim 29, wherein applying the current comprises implanting a control unit at a site at a lower side of a bony palate of the patient.

145-406. (Cancelled)

407. (New): Apparatus according to claim 1, wherein the control unit is adapted to configure the current so as to facilitate uptake, through the BBB, of a therapeutic agent for treating a medical condition, when the permeability of the BBB is increased.

408. (New) Apparatus according to claim 407, wherein the condition includes a brain tumor, and wherein the control unit is adapted to configure the

current so as to facilitate the uptake of the therapeutic agent for treating the brain tumor.

409. (New) Apparatus according to claim 26, wherein the drug includes large pharmaceutical molecules selected from the list consisting of: hydrophilic molecules having a molecular weight of greater than about 200 Da, and lipophilic molecules having a molecular weight of greater than about 500 Da, and wherein the control unit is adapted to configure the current so as to facilitate the uptake of the large pharmaceutical molecules through the BBB.

410. (New) A method according to claim 29, comprising administering, to a systemic blood circulation of the patient, a therapeutic agent for treating a medical condition, wherein applying the current comprises configuring the current so as to facilitate uptake of the therapeutic agent through the BBB when the permeability of the BBB is increased.

411. (New) A method according to claim 410, wherein administering the therapeutic agent comprises commencing administration of the therapeutic agent prior to initiating the application of the current.

412 (New) A method according to claim 410, wherein administering the therapeutic agent comprises administering the therapeutic agent shortly after initiating the application of the current.

413. (New) A method according to claim 410, wherein the therapeutic agent includes large pharmaceutical molecules selected from the list consisting of: hydrophilic molecules having a molecular weight of greater than about 200 Da, and

lipophilic molecules having a molecular weight of greater than about 500 Da, and wherein administering the therapeutic agent comprises administering the large pharmaceutical molecules.

414. (New) A method according to claim 410, wherein the condition includes a brain tumor, and wherein administering the therapeutic agent comprises administering a drug for treating the brain tumor.

415. (New) A method according to claim 410, wherein the therapeutic agent includes a chemotherapeutic drug, and wherein administering the therapeutic agent comprises administering the chemotherapeutic drug.